Message

From: Gillespie, Andrew [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=DCE99ECE87694A06B3009D7756E2A89E-GILLESPIE, ANDREW]
Sent: 10/19/2018 4:34:02 PM
To: Orme-Zavaleta, Jennifer [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=3c5a111dc377411595e5b24b5d96146b-Orme-Zavaleta, Jennifer]; Rodan, Bruce [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=Rodan, Bruce]; Dunlap, David [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=591eb15a268249dda0c05a7451f765c3-Dunlap, Dav]; Mattas-Curry, Lahne [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d4369134369c4390991cf783c5c578aa-Mattas-Curry, Lahne]; Grevatt, Peter [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=d3caa0c39ebe44cb9d3ae44da7543733-Grevatt, Peter]
Subject: Fwd: DEQ Staff READ: FW: "Do not eat" deer advisory issued for Oscoda Township
Attachments: Advisory_Area_zone final draft DNE Deer.pdf; ATT00001.htm

Just in time for hunting season...

Andrew JR Gillespie, PhD
Associate Director USEPA/ORD/NERL
ORD Executive Lead for PFAS R&D

Office 9195413655. Mobile Personal Matters / Ex. 6

Begin forwarded message:

> **From:** "Davison, Jenny" <davison.jenny@epa.gov>
> **Date:** October 19, 2018 at 12:27:54 PM EDT
> **To:** "Burchette, John" <Burchette.John@epa.gov>, "Cooke, Maryt" <Cooke.Maryt@epa.gov>
> **Cc:** "Gillespie, Andrew" <Gillespie.Andrew@epa.gov>, "Fusinski, Keith" <fusinski.keith@epa.gov>
> **Subject: FW: DEQ Staff READ: FW: "Do not eat" deer advisory issued for Oscoda Township**
>
> FYI--
>
> ---
>
> **From:** Prendiville, Timothy
> **Sent:** Friday, October 19, 2018 11:12 AM
> **To:** Davison, Jenny <davison.jenny@epa.gov>
> **Cc:** Maurice, Charles <maurice.charles@epa.gov>; DiCosmo, Nefertiti <dicosmo.nefertiti@epa.gov>
> **Subject:** FW: DEQ Staff READ: FW: "Do not eat" deer advisory issued for Oscoda Township
>
> FYI, PFAS found in one deer (out of 20 tested) prompting a do not eat advisory around Wurtsmith.
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> ---
>
> **From:** Baltusis, Matt (DEQ) [mailto:BALTUSISM@michigan.gov]
> **Sent:** Friday, October 19, 2018 10:13 AM
> **To:** Prendiville, Timothy <prendiville.timothy@epa.gov>
> **Subject:** FW: DEQ Staff READ: FW: "Do not eat" deer advisory issued for Oscoda Township
>
> FYI.

From: Thelen, Mary Beth (DEQ)
Sent: Friday, October 19, 2018 11:07 AM
Subject: DEQ Staff READ: FW: "Do not eat" deer advisory issued for Oscoda Township

Dear DEQ Staff,

Director Heidi Grether asked that I forward to you tis important information. Please see below and scroll down for further information as well.

For more information:

- Michigan PFAS Response: https://www.michigan.gov/pfasresponse/
- Michigan's Eat Safe Fish Guidelines: https://www.michigan.gov/eatsafefish
- EPA PFAS Info Page: https://www.epa.gov/pfas
- Call the Michigan Toxics Hotline at 1-800-648-6942
- Discuss with a healthcare professional

Thank you for your attention to this.

Mary Beth

Mary Beth Thelen
Executive Management Assistant to the Director
Department of Environmental Quality
517-284-6712 or 284-6700
Thelenm2@michigan.gov

From: Creagh, Keith (DNR)
Sent: Friday, October 19, 2018 10:58 AM
To: DNR-All <DNR-All@michigan.gov>
Subject: "Do not eat" deer advisory issued for Oscoda Township

This is a DNR-All message.

Today, the Michigan Departments of Health and Human Services (MDHHS) and Natural Resources (DNR) will be issuing a 'Do Not Eat' advisory for deer taken within approximately five miles of Clark's Marsh in Oscoda Township. The advisory is due to high levels of PFOS (perfluorooctane sulfonic acid) found in a single deer taken about two miles from Clark's Marsh, which borders the former Wurtsmith Air Force Base. PFOS is one type of PFAS (per- and polyfluoroalkyl substances) chemical.

One deer out of twenty tested around the former Wurtsmith Air Force Base was found to have high levels of PFOS. The level of PFOS in the muscle of the deer was 547 parts per billion, exceeding the level of 300 ppb at which action is recommended. PFAS was either not found or was at low levels in muscle samples from the other 19 deer. Although only one deer of this group tested at such high levels, the advisory was issued to protect the health of anyone eating venison taken within approximately five miles of Clark's Marsh. The state has plans to test more deer from this area.

The five-mile radius encircles the Wurtsmith base property and covers what the DNR has estimated to be the expected travel range of deer living in or near the marsh. The area covered by the deer consumption advisory issued can be described as:
From Lake Huron west along Aster Street, west on Davison Road, north on Brooks Road, east on Esmond Road, north on Old US 23, north on Wells Road, west on River Road, north on Federal Forest Road 2240,

north on Lenard Road, north on Indian Road, and East on E. Kings Corner Road (along the county line) toward Lake to Lake Road, to Lake Huron (map attached).

DNR also collected an additional 60 deer for PFAS testing this year as part of the Michigan PFAS Action Response Team's work on this emerging contaminant. In addition to the testing around Wurtsmith, 20 deer were taken from near each of the PFAS investigation sites in Alpena, Rockford and Grayling with known contamination in lakes and rivers. The deer meat tested from these areas was found to have no PFAS or very low levels of the chemical. An additional 48 samples of deer muscle from the 2017 hunting season were tested from other areas across the state. Preliminary data for these deer also show no PFAS contamination or very low levels of the chemical.

The agencies do not find any evidence at this time to warn against consumption of deer taken elsewhere in the state.

PFAS are chemicals that are in Class B fire-fighting foam that was used at the air force base near Wurtsmith and other sites in Michigan. These chemicals are also found in stain and water repellants, personal care products, and many other consumer goods. Some health studies have linked PFAS to health issues such as thyroid disease, increased cholesterol levels, impaired immune system function, reproductive issues, high blood pressure in pregnant women, and increased chance of kidney and testicular cancers.

MDNR and MDHHS developed this investigation in response to questions from hunters concerned about harvesting deer in contaminated areas. This is the first study of its kind and very little scientific information exists on whitetail deer and PFAS chemicals.

It is unknown how PFAS could accumulate to this level in deer. The State of Michigan is investigating the circumstances of the one deer with elevated levels and doing further analysis on these test results to learn more about PFAS in deer and wildlife. In addition, the state will be doing additional testing on deer from the Clark's Marsh region and performing modeling studies to learn about PFAS consumption in wildlife.

MDHHS and MDNR advise hunters to dispose of any deer in their freezer that may have come from this area and do not eat it.

If customers have health related questions have them contact MDHHS at 1-800-648-6942.

Hunters who would like replacement tags for deer they throw away can contact the DNR at 517-284-6057 or DNR-CustomerService@michigan.gov and staff there will assist them.

Media calls must be directed to:
MCHHS: Angela Minicuci, 517-241-2112,
MinicuciA@michigan.gov
DNR: Tammy Newcomb, 517-284-5832, NewcombT@michigan.gov
Please see the below answers to questions you may be asked by our customers or the public.

Questions and answers:
How do we know this wasn't just a unique situation or a mistake?
The kidney and liver from this deer confirmed this result with very high levels of PFOS. The muscle, kidney, and liver samples from this deer were all received at the laboratory individually packaged, processed separately on different days, and analyzed at the laboratory separately, so the high results in all three tissues helps to confirm these results.

If I have a deer in my freezer from the PFAS "do not eat" advisory area what do I do with it?
We recommend that you do not eat it, because there is a possibility that it could have a high level of contamination. For more information about PFAS in wild game and fish, visit Michigan.gov/pfasresponse and go to the Fish and Wildlife button. For more information about wild game consumption, visit Michigan.gov/eatsafegame and go to the Eat Safe Wild Game button. If you have health related questions please contact MDHHS at 1-800-648-6942.

Where do I dispose of it?
You can dispose of it in your trash or landfill.

How can I have it tested? Can I take a full deer to a regular check station to have it tested for PFAS?
Unfortunately at this time, individual deer testing is not possible. We are looking into possible options for the future.

Can I take my deer to a processor or do I need to have test results first?
Hunters should not eat deer from the "do not eat" advisory area. Hunters should dispose of deer harvested from within 5 miles of Clark's Marsh in Oscoda Township. We advise processors to ask hunters where they harvested their deer. If they were taken from this area, they should be disposed of.

What parts are safe for me to eat?
None. Do not eat any deer that came from within five miles of Clark's Marsh. In addition. If your deer came from another area, MDHHS recommends you do not eat kidneys or liver of deer because PFAS and other chemicals are stored in the organs. For more information about PFAS in wild game and fish, visit Michigan.gov/pfasresponse and go to the Fish and Wildlife button. For more information about wild game consumption, visit Michigan.gov/eatsafegame and go to the Eat Safe Wild Game button. If you have health related questions, please contact MDHHS at 1-800-648-6942.

Can't I just cook it really well?
No. You cannot get rid of PFAS by cooking the meat or organs.

What if I've already eaten it? What about my kids?
One of the twenty deer tested near Clark's Marsh had high levels of PFAS, so not all deer in the area have high levels of PFAS. If you have eaten deer with PFAS, it doesn't mean you are sick or will get sick. For more information about PFAS in wild game and fish, visit Michigan.gov/pfasresponse and go to the Fish and Wildlife button. For more information about wild game consumption, visit Michigan.gov/eatsafegame and go to the Eat Safe Wild Game button. If you have health related questions, please contact MDHHS at 1-800-648-6942.

What health problems can be linked with consuming PFAS?
No one can say for certain if PFAS will harm your health. Some health studies found health problems linked to too much PFAS such as:
- Lowering a woman's chance of getting pregnant
- Increasing the chance of high blood pressure in pregnant women
- Increasing the chance of thyroid disease
- Increasing cholesterol levels
- Changing immune response
- Increasing chance of cancer, especially kidney and testicular cancers

Studies in animals help us understand what could happen in people. In testing, scientists have found that animals given high amounts of PFAS chemicals showed:
- Harm to the liver
- Harm to the body's ability to fight off sickness
- Birth defects, slow growth, and newborn deaths

If you have medical questions, talk with your doctor. You may find ATSDR's factsheet, "Talking to Your Doctor about Exposure to PFAS" helpful. It is available at www.atsdr.cdc.gov/pfas.

I've eaten deer from this area. Should I have my blood tested?
Blood tests are available that can measure the amount of PFAS in blood at the time it is collected. However, the test cannot tell you how much PFAS was in your blood in the past or if the PFAS has or will cause a medical condition.
According to the Center for Disease Control and Prevention, most people in the United States have measurable amounts of PFAS in their blood, especially PFOA and PFOS. There is no medical treatment to remove PFAS from blood.
If you're thinking about having your blood tested for PFAS, talk to your doctor.

How is PFAS different from deer diseases?
Deer diseases are caused by a bacteria or viruses, and are usually contagious. PFAS is a chemical picked up from contamination in the environment rather than spread from one deer to another. If a deer has PFAS in its meat or organs, it could show signs of illness, but it would not necessarily pass it on to other deer. Very little is known about the effects that PFAS has on deer.

What percent of deer potentially have high levels of PFAS?
It is unknown at this time how many deer are potentially affected by PFAS exposure at this site. Additional testing of deer is necessary before these determinations can be made. Very little is known about the effects that PFAS has on deer.

What does a PFAS deer look like? How can I tell which deer have it so I can avoid shooting one? What should I do if I see a sick deer?
A deer that has been exposed to PFAS may not show any signs or symptoms of being sick. If you see a deer that appears to be sick, contact the DNR hotline at 800-292-7800.

If I harvested a deer from the "do not eat" area, can I get a replacement tag so I can take another deer?
If a deer was harvested within five miles of Clark's Marsh before learning about the advisory, a replacement license may be issued. Call (517) 284-6057 or email DNR-CustomerService@michigan.gov. The hunter can keep the antlers if taken with the original tag.

Are there rules for transporting deer from a "do not eat" area?
There are no transportation rules from this area. However, MDHHS and DNR recommend hunters do not eat the meat and organs and dispose of any deer taken from this region.

What about baiting and feeding in that area? What other regulations will there be on hunting?
There are no additional regulations at this time.

Why the five-mile radius?
The deer with high PFAS levels was taken about two miles from Clark's Marsh. Deer usually travel about 1 to 1.5 miles. The "do not eat" advisory extends five miles around the Marsh in order to provide an extra measure of protection for hunters and their families.

The five-mile area has some features that likely restrict deer access and movement. There are fences, urban development, and large swamps that likely restrict access by the deer to Clark's Marsh. Though deer can and do come into contact with this area, these restrictions likely limit the number of deer that are being affected by the contamination at Clark's Marsh.

What precautions should processors take in the event a deer has been contaminated by PFAS?

Processors should ask hunters where they harvested their deer and if it's from the area surrounding Clark's Marsh, they should dispose of it. Normal sanitation procedures should be sufficient in the event a processing machine comes in contact with PFAS.

What about other parts of the state? Is it still safe to eat deer where there have been other "do not eat fish" advisories?

At this time, there is no evidence that causes State agencies to issue advisories on eating deer at any of the other locations tested for PFAS. Clark's Marsh is a unique situation near the former Wurtsmith Air Force Base with known levels of high contamination. The state is actively sampling in other locations to determine if there is the potential for similar situations. As a reminder, this event was a single deer with very high levels.

For more information:

- Michigan PFAS Response: https://www.michigan.gov/pfasresponse/
- Michigan's Eat Safe Fish Guidelines: https://www.michigan.gov/eatsafefish
- EPA PFAS Info Page: https://www.epa.gov/pfas
- Call the Michigan Toxics Hotline at 1-800-648-6942
- Discuss with a healthcare professional

Keith Creagh
Director